

Message

From: Ross, Mary [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=98359CD1F66F46EC91D327E99A3C6909-ROSS, MARY]
Sent: 2/22/2016 11:35:54 PM
To: ORD-NCEA [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=9fd27be854b0475e8c7da44e626886aa-ORD-NCEA]
Subject: FW: ORD/OSA Weekly

I'm forwarding this week's update on ORD activities. NCEA isn't specifically named below, but NCEA scientists have been working on several of the projects listed below . . .

From: Blackburn, Elizabeth
Sent: Sunday, February 21, 2016 2:19 PM
To: ORD-Exec-Council-Directors <Execcouncildirectors@usepa.onmicrosoft.com>; ORD-Mgmt-Council <ORDMgmtCouncil@epa.gov>
Cc: ORD-IOAA-Front Office Support <ORDIOAASUPPORT@epa.gov>
Subject: Fwd: ORD/OSA Weekly

Hello all

Please see Tom's note to the Administrator below. It covers two weeks of information as Tom was unable to send a note last weekend.

Liz

Liz Blackburn
Chief of Staff
EPA Office of Research and Development
202-564-2192
Cell Personal Matters / Ex. 6

Sent from my iPhone

Begin forwarded message:

From: "Burke, Thomas" <Burke.Thomas@epa.gov>
Date: February 21, 2016 at 1:44:24 PM EST
To: "Adm13McCarthy, Gina" <Adm13McCarthy.Gina@epa.gov>, "Meiburg, Stan" <Meiburg.Stan@epa.gov>, "Fritz, Matthew" <Fritz.Matthew@epa.gov>, "Purchia, Liz" <Purchia.Liz@epa.gov>, "Beauvais, Joel" <Beauvais.Joel@epa.gov>, "Vaught, Laura" <Vaught.Laura@epa.gov>, "Pieh, Luseni" <Pieh.Luseni@epa.gov>, "Rupp, Mark" <Rupp.Mark@epa.gov>, "Garbow, Avi" <Garbow.Avi@epa.gov>, "Scaggs, Ben" <Scaggs.Ben@epa.gov>, "Distefano, Nichole" <DiStefano.Nichole@epa.gov>, "Garvin, Shawn" <garvin.shawn@epa.gov>, "Jones, Jim" <Jones.Jim@epa.gov>, "McCabe, Janet" <McCabe.Janet@epa.gov>
Cc: "Kadeli, Lek" <Kadeli.Lek@epa.gov>, "Kavlock, Robert" <Kavlock.Robert@epa.gov>, "Blackburn, Elizabeth" <Blackburn.Elizabeth@epa.gov>, "Deener, Kathleen" <Deener.Kathleen@epa.gov>, "Smith, Kelley" <Smith.Kelley@epa.gov>, "Hubbard, Carolyn" <Hubbard.Carolyn@epa.gov>, "Kim, Hyon" <Kim.Hyon@epa.gov>
Subject: ORD/OSA Weekly

Administrator,

I am pleased to present the ORD/OSA weekly report. We are engaged with the programs and regions providing technical assistance and support on a growing number of issues. Activities

include coordination with OCSP in the multi-agency NSC response to Zika, support for our efforts in Flint, Gold King Mine modeling and monitoring, tire crumb playing fields, PFOA assessment, and methyl bromide treated crop burning. Each of these activities include multidisciplinary ORD teams from across our labs and national programs. In addition, in response to your elevation policy, ORD/OSA leadership are mapping out an organizational strategy to make sure important emerging issues are communicated and our best scientific, technical, and administrative talents are available to respond.

The best news of the week...

ORD Researcher Receives Presidential Early Career Awards for Scientists and Engineers

Rebecca Dodder is one of 106 researchers who received this prestigious award - the highest honor bestowed by the U.S. Government on science and engineering professionals in the early stages of their independent research careers. Rebecca's research primarily focuses on modeling future energy production and use. Rebecca will receive her award at a Washington, DC, ceremony this spring. Recipients of this award receive up to \$75K toward research efforts.

The rest...

Flint, MI

ORD is actively involved in providing scientific support and coordinating with CDC/ATSDR. We maintain active participation in the EPA Task Force, and have been onsite in Flint developing a sampling plan to assess chlorine levels in the drinking water distribution system. The plan identifies 24 sites that are representative of the distribution system. Region 5 is now collecting weekly samples and ORD is evaluating the data and mapping the levels of residual chlorine. We are also working on a strategy for presentation and interpretation of all of the sampling data to provide a progress report on system restoration efforts. ORD completed construction of four pipe

loop rigs that were delivered to Flint's water treatment plant to conduct corrosion control treatment optimization studies.

Sebring, OH

ORD scientists continue to provide technical advice on lead detected in the Sebring's drinking water. Similar to Flint, there was inadequate corrosion control in the drinking water treatment system leading to corrosion of the lead service lines. The Region and State have asked ORD to work with the City of Sebring to help identify where the lead service lines are located and to implement a distribution system monitoring scheme. ORD provided the Flint lead sampling protocol to use in developing their protocols. The City has identified sampling locations and will begin sampling on February 19. ORD is not conducting the sampling nor the analyses.

Gold King Mine

This week ORD will present EPA's analysis of the transport and fate of acid mine drainage released from the Gold King Mine in August 2015 to the peer review panel. The contract led peer review on Feb. 23-25, 2016 includes experts in geochemistry; metal toxicity; groundwater modeling; fate and transport of metals in water and sediment; and the Water Quality Analysis Simulation Program.

Tire Crumb

The tire crumb research continues to move forward. On Friday February 12, we announced the Federal Research Action Plan for Tire Crumb. Last week a 60-day Federal Register Notice was published that describing the study. We are preparing a study design document for external peer review. EPA and CDC, in coordination with California EPA, visited two facilities in southern California that recycle tires into crumb rubber for use on synthetic turf fields and received samples to begin analyses.

Board on Environmental Studies and Toxicology

Bob Kavlock and I participated in the meeting of the NRC/BEST committee on February 18th. We discussed the impact that BEST reports have had on EPA science and the expectations for

upcoming reports. We also spent time on the role that BEST could have providing nimble scientific support and advising on rapid response activities such as GKM, Flint, or emerging challenges like PFOA.

Recently Published NIOSH Update

In early February, the National Institute for Occupational Safety and Health published *Criteria for a Recommended Standard: Occupational Exposure to Heat and Hot Environments* (<http://www.cdc.gov/niosh/docs/2016-106/pdfs/2016-106.pdf>), a significant update to its 1986 document on the subject. ORD's work on heat exposure affecting the absorption of chemicals is cited prominently in the document.

ORD support for Methyl Bromide research in Region 10

Region 10 has requested ORD research support for methyl bromide air emissions and fate and transport. They asked ORD to perform a combustion study of crops that were grown in fields previously treated with methyl bromide to control a nematode infestation. Region 10 would also like ORD assistance with modeling the potential transport, fate and toxicity of the constituents in the combustion emissions and residues. This information will allow the region to assess whether combustion of the crops can proceed without human health or environmental impacts and what might be effective options for removing bromides from the fields.

Clam Bioaccumulation of Arsenic in Region 10

ORD is partnering with Region 10 on the RARE project, *Will sediment remediation reduce uptake of arsenic by the eastern softshell clam, Mya arenaria*? As a part of that project, analysis of clam samples for total arsenic and individual arsenic compounds is now underway. This project addresses a key issue in Region 10 because this clam has high levels of inorganic arsenic in its tissues and is a driver of risk to human health in the Lower Duwamish Waterway.

Last Week

AAAS Panel

On February 13 I enjoyed participating in a panel at the AAAS conference, “Federal Science and the Public Good: U.S. Agency Science-Based Decision-Making.” I joined David Michaels from OSHA, Kathleen Rest from Union of Concerned Scientists and Alan Thornhill from USGS for this important discussion about the importance of independent science to decision-making. We also had a great chance to talk to young science professionals about science careers in federal agencies.

ORD collaborates with Department of Defense and General Electric on Sensor Testing

February 16-18, ORD collaborated with the DOD’s Technical Support Working Group and General Electric Global Research Center to test prototype sensors for fumigants. ORD has conducted research to evaluate the effectiveness of various fumigants on the decontamination of anthrax-contaminated surfaces. This newly developed sensor may provide a solution to monitor the fumigation process in an effective and affordable manner. The sensors are intended to be inexpensive (less than one dollar per copy) and therefore widely distributed throughout the structure being fumigated, potentially leading to greater assurance of fumigant efficacy.

People, Prosperity & the Planet (P3) Phase I Grants

On February 16, we announced the P3 Phase I award recipients. The P3 program is a unique competition challenging college students to design solutions for a sustainable future. Recipients will research and develop their design projects during the upcoming academic year. Proposals include: developing 3D printing for water pollution remediation; building an aquaponics system in help feed the hungry; repurposing trash for insulation; and building a “Greenbox” that will collect and convert spoiled food into energy.

ORD Webinar on Healthy Heart Program

On February 17, ORD’s Wayne Cascio presented the “EPA Tools and Resources Webinar: Healthy Heart Program” state

environment and health agencies, tribes, local governments, communities, and others interested in learning about the steps to take to reduce health effects from air pollution. Healthy Heart is the EPA's environmental health literacy program that provides timely and meaningful information to public health practitioners, healthcare providers, and individuals at higher risk from exposure to particle pollution in the air.

Canadian Minister of Science

The new Canadian Minister of Science, Dr. Kirsty Duncan, met with Dr. Bob Kavlock to explore areas for building on the existing cross-border collaboration and cooperation. She was interested in how U.S. Agencies ensure that scientific findings are communicated in an appropriate and accessible way to policymakers. She was specifically interested in the role of the EPA Science Advisor as she has a mandate to create a Chief Science Officer directed to ensure that government science is fully available to the public, that scientists are able to speak freely about their work, and that scientific analyses are considered when the government makes decisions. The discussions also touched on the development of environmental assessments, citizen science and climate change.

Making a Difference in the Community Award

ORD's Steve Rock was honored February 6 as a finalist for the Duke Energy Children's Museum Difference Makers Award. Steve was recognized for his work with the 500 Gardens Project, designed to identify and remove barricades to food production in the Madisonville area (a food desert and suburb of Cincinnati). 500 Gardens provides raised soil/compost gardening beds for backyards, schools, businesses and daycare centers. Steve has taught over 50 "Garden 101" classes, hosts monthly gardener gatherings, employs neighborhood youths to build gardens, and uses volunteers from local schools and Madisonville Youth Corps.

Science Matters Stories Having a Positive Impact

Last week we received a web comment from a physician's assistant working in Navajo Nation, who read our Science

Matters story about residential heating in Navajo Nation, and she wanted to help out. We reached out to the points of contact for the story, and Region 9's Kathleen Stewart responded enthusiastically, saying that she could use help getting the word out about stove changeouts and advice on how to prioritize recipients for new stoves based on existing health conditions. They are now in touch and will continue to talk about ways they can work together.

Publications

EPA STAR Grantee Publication

Helen Nguyen, University of Illinois at Urbana-Champaign, published an article, Response of Simulated Drinking Water Biofilm Mechanical and Structural Properties to Long-Term Disinfectant Exposure, in the Environmental Science and Technology journal. Biofilms occurrence is problematic for drinking water distribution systems because they can accumulate and release pathogens potentially affecting water quality and public health. Researchers studied how long-term exposure of two common drinking water disinfectants, chlorine and chloramine, affected biofilms within the drinking water distribution system. The three months of disinfectant exposure did not completely remove the biofilms from the system but stiffened the biofilms resulting in better resistance to mechanical detachment. Dr. Nguyen and her team believe that this study is the first to shed light on how biofilm properties change during long-term exposure to disinfectants. These results are significant because they will contribute to further research on the risk assessment and control of biofilm-associated pathogens.